

### REMARKS

In the March 14, 2003 Office Action, the drawings were objected to and all of the claims stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

#### *Status of Claims and Amendments*

In response to the March 14, 2003 Office Action, Applicant has amended the specification and claims 1, 2, 9 and 11 as indicated above. Specifically, claims 2, 9 and 11 were amended to place them in independent form. Claims 1 and 9 were also amended to more clearly define the present invention over the prior art of record. Thus, claims 1-21 are pending, with claims 1, 2, 9, 11 and 12 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of the above amendments and the following comments.

#### *Drawings*

In the numbered paragraph 1 of the Office Action, the drawings were objected to as failing to comply with 37 C.F.R. §1.84(p)(4), because the reference character 27 was used to designate two distinct pins. In response, Applicant has amended the specification and filed four (4) replacement sheets of drawings, including Figures 2, 3, 6(a), 6(b) and 7. Specifically, the reference numeral 27 used to designate two different pins was replaced by the reference numerals 27a and 27b, to designate each of the pins with a different reference numeral in Figures 2, 3, 6(a), 6(b) and 7. In view of these drawing changes, withdrawal of the objection is respectfully requested. Approval and entrance of the four (4) replacement sheets of drawings including Figures 2, 3, 6(a), 6(b) and 7 are also respectfully requested.

#### *Specification*

No objections were made to the specification in the Office Action. However, Applicant amended the specification to replace the reference numeral 27 used to designate two different pins with the reference numerals 27a and 27b, to designate each of the pins with a different reference numeral. The specification was also amended to correct minor typographical errors.

#### *Rejections - 35 U.S.C. §102*

In the numbered paragraphs 2 and 3 of the Office Action, claims 1, 9 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,730,012 (Juy). In response, Applicant has amended claim 9 to place it in independent form. Applicant has also

amended claims 1 and 9 to more clearly define the present invention over the prior art of record.

Turning first to independent claim 1, this claim, as now amended, requires  
a fixed member including a first mounting flange, a second  
mounting flange axially spaced from the first mounting flange  
and *a curved mounting surface having a center axis;*  
a first link having a *cable attachment portion;* and  
a second link pivotally coupled to the first and second mounting  
flanges for rotation about a second pivot axis,  
*the first mounting flange extending in a rearward axial direction  
along the second pivot axis relative to the center axis of the  
curved mounting surface and the second mounting flange  
extending in a forward axial direction along the second pivot  
axis relative to the center axis of the curved mounting  
surface.*

Clearly, this structure is *not* anticipated by the Juy patent or any other prior art of record. It is well settled under U.S. patent law that for a reference to anticipate a claim, the reference must disclose each and every element of the claim within the reference. Therefore, Applicant respectfully submits that independent claim 1, as now amended, is *not* anticipated by the prior art of record. Withdrawal of this rejection is respectfully requested.

Turning now to independent claim 9, this claim, as now amended, requires  
*a first link* pivotally coupled to the fixed member at a first pivot point for  
rotation *about a first pivot axis, the first link having a cable attachment  
portion,*  
*a second link* pivotally coupled to the first and second mounting flanges for  
rotation *about a second pivot axis* passing through the first and second  
mounting flanges that is substantially parallel to the first pivot axis, *the first  
pivot axis being spaced farther from a center longitudinal plane of a chain  
receiving slot of a chain guide than the second pivot axis as measured in a  
direction perpendicular to the center longitudinal plane of the chain  
receiving slot.*

Clearly, this structure is *not* anticipated by the Juy patent or any other prior art of record. While the Juy patent discloses a speed change mechanism having a lever 4 (i.e., a first link) with a cable locking means that pivots about a hinge pin 18 (i.e., a first axis), a lever 3 (i.e., a second link) that pivots about a hinge pin 5 (i.e., a second axis), and a fork 2, the Juy patent shows that the hinge pin 18 (i.e., *the first axis*) is closer to the fork 2 than the hinge pin 5 (e.g., *the second axis*). In other words, the Juy patent *fails* to disclose a first link pivotally coupled to a fixed member at a first pivot point for rotation about a first pivot axis and a second link pivotally coupled to first and second mounting flanges for rotation about a second pivot axis, in which the *first link has a cable attachment portion* and the *first pivot axis is spaced farther* from a *center longitudinal plane* of a chain receiving slot of a chain guide *than* the *second pivot axis* as measured in a direction perpendicular to the center longitudinal plane of the chain receiving slot, as now set forth in independent claim 9.

It is well settled under U.S. patent law that for a reference to anticipate a claim, the reference must disclose each and every element of the claim within the reference. Therefore, Applicant respectfully submits that independent claim 9, as now amended, is *not* anticipated by the prior art of record. Withdrawal of this rejection is respectfully requested.

Moreover, Applicant believes that the dependent claim 10 is also allowable over the prior art of record in that it depends from independent claim 9, and therefore is allowable for the reasons stated above. Also, the dependent claim 10 is further allowable because it includes additional limitations.

Applicant respectfully requests withdrawal of the rejection.

#### ***Rejections - 35 U.S.C. §103***

In the numbered paragraphs 4 and 5 of the Office Action, claims 2-8 and 11-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,730,012 (Juy). In response, Applicant has amended claims 2 and 11 to place them in independent form.

With regard to claims 2-8 and 11-21, the Office Action acknowledges that the Juy '012 patent discloses the basic apparatus as previously cited but does not disclose the specific dimensional relationships of the elements. However, the Office Action asserts that the actual dimension is merely a matter of engineering design choice and the level of skill of one of ordinary skill in the art would produce a similar optimization, especially absent any evidence to the contrary, i.e., unexpected results. Applicant respectfully disagrees with this assertion with regard to all of the rejected claims 2-8 and 11-21.

With regard to claims 2-8, these claims, as now amended, require a fixed member having a mounting portion configured to be coupled to a frame portion of the bicycle; and a first link pivotally coupled to the fixed member at a first pivot point for rotation about a first pivot axis, in which *the fixed member is configured with the first pivot axis being spaced less than about 5.0 millimeters from a center plane of the frame portion, measured perpendicular to the first pivot axis.*

In contrast, the Juy patent shows hinge pins 5 and 18 (i.e., pivot axes) for levers 3 and 4, respectively, which are spaced away from a bicycle frame. See, Figures 1, 5 and 6 of the Juy patent.

The claimed spacing of the pivot axis is an important feature of the present invention. As discussed in the specification, e.g., at page 7, lines 15-18, the location of the pivot axis and the wide configuration of the linkage assembly *aid in providing smooth, reliable shifting of a chain between sprockets.* In other words, the arrangement of the first pivot axis of the present invention is *superior* to arrangement of pivot axes of the Juy speed change mechanism.

Moreover, Applicant respectfully asserts that modifying the Juy patent to meet the limitations of claims 2-8 of the present invention is *not* merely a matter of changing the location of a pivot axis of the speed change mechanism of the Juy patent. Rather, the speed change mechanism of the Juy patent would have to be completely reconstructed to meet the limitations of claims 2-8 of the present invention.

More specifically, if the location of any of the pins 5 and 18 of the Juy patent was some how modified to meet the claims of the present invention, it would require complete reconstruction of the casing 1 and at least one of the lever 3, the lever 4, the fork 2 and the spring 12, which would *destroy* the teaching of the Juy patent. Therefore, Applicant respectfully requests that this rejection be withdrawn in view of the above comments.

Also, the dependent claim 3 further requires that the *second link has a longitudinal dimension measured along the second pivot axis that is at least about 45.0 millimeters in length.*

In contrast, the Juy patent discloses a lightweight speed change mechanism with relatively narrow levers 3 and 4 that are dimensioned to fit inside grooves 1a and 1b of a casing 1. More specifically, part of the lever 3 is dimensioned to fit inside the casing 1 so it is protected inside the casing 1. See, Figs 1, 5, 6 and column 3, lines 3-26 of the Juy patent.

The claimed *width of the second link measured along the second pivot axis* is an important feature of the present invention. As discussed in the specification, e.g., at page 3, lines 22-24, the wide link *prevents flexing of the chain guide during shifting*. In other words, the wide second link of the present invention is *superior* to the levers 3 and 4 of the speed change mechanism of the Juy patent.

Moreover, Applicant respectfully asserts that modifying the Juy patent to meet the limitations of claim 3 of the present invention is *not* merely a matter of changing a width of a lever of the Juy patent. Rather, the speed change mechanism of the Juy patent would have to be completely reconstructed to meet the limitations of claim 3 of the present invention.

More specifically, if the width of any of the levers 3 and 4 (i.e., links) of the Juy patent was some how widened to meet the claims of the present invention, it would require complete reconstruction of the casing 1 and possibly other parts of the speed change mechanism of the Juy patent, which would destroy the teaching of the Juy patent.

Finally, there *does not* appear to be any advantage to modifying the Juy patent to meet the limitations of claim 3 of the present invention. For example, at least one of the grooves 1a and 1b of the casing 1 would have to be made wider than at least about 45.0 mm to accommodate a wider lever. This would likely require making the speed change mechanism larger and heavier. This modification is *not* practical, since it is desirable in the bicycle art to make components light weight, as explained in the Juy patent. Therefore, Applicant respectfully requests that this rejection be withdrawn in view of the above comments.

In addition, the dependent claim 7 further requires that the *axial width of the first mounting flange is at least about five times thicker than the axial width of the second mounting flange*.

Applicant respectfully asserts that modifying the Juy patent to meet the limitations of claim 7 of the present invention is *not* merely a matter of changing an axial width of a mounting flange of Juy patent. Rather, the speed change mechanism of the Juy patent would have to be significantly reconstructed to meet the limitations of claim 7 of the present invention.

More specifically, the axial width of one flange of the casing 1 would have to be *selectively* enlarged without proportionately enlarging the axial width of another flange of the casing 1, to result in claimed ratio of axial widths of claim 7. This selective enlargement

would require substantial reconstruction of the casing 1 and possibly other parts of the speed change mechanism of the Juy patent, which would destroy the teaching of the Juy patent.

Applicant respectfully asserts that it is inescapable that *selective* enlargement of the axial width of one flange of the casing 1 without proportioned enlargement of the axial width of another flange of the casing 1 would result in the Office Action using hindsight gleaned from Applicant's disclosure to reconstruct Applicant's claimed invention. Therefore, Applicant respectfully requests that this rejection be withdrawn in view of the above comments.

Turning now to independent claim 11, this claim, as now amended, requires that the *axial width of the first mounting flange be at least about five times thicker than the axial width of the second mounting flange.*

For similar reasons as mentioned above with regard to the argument for claim 7, independent claim 11 is believed to be patentable over the prior art of record. Accordingly, withdrawal of the rejection is respectfully requested.

Turning now to claims 12-21, these claims require *a second link having a longitudinal dimension measured along the second pivot axis that is at least about 45.0 millimeters in length.*

For similar reasons as mentioned above with regard to the argument for claim 3, claims 12-21 are believed to be patentable over the prior art of record. Accordingly, withdrawal of the rejection is respectfully requested.

Also, the dependent claim 13 further requires that the fixed member is configured with *the first pivot axis being spaced less than about 5.0 millimeters from a center plane of the frame portion,* measured perpendicular to the first pivot axis.

For similar reasons as mentioned above with regard to the argument for claims 2-8, claims 13 is believed to be further patentable over the prior art of record. Accordingly, withdrawal of the rejection is respectfully requested.

In addition, the dependent claim 15 further requires that *the axial width of the first mounting flange is at least about five times thicker than the axial width of the second mounting flange.*

For similar reasons as mentioned above with regard to the argument for claim 7, claim 15 is believed to be further patentable over the prior art of record. Accordingly, withdrawal of the rejection is respectfully requested.

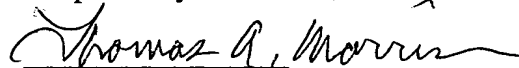
***Prior Art Citation***

In the Office Action, additional prior art references were made of record. Applicant believes that these references do not render the claimed invention obvious.

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In view of the foregoing amendment and comments, Applicant respectfully asserts that claims 1-21 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,



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